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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,848	12/08/2003	Kwang Hyun Kim	40296-0043	9273
26633	7590	03/28/2005	EXAMINER	
HELLER EHRMAN WHITE & MCAULIFFE LLP			ENGLUND, TERRY LEE	
1717 RHODE ISLAND AVE, NW			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20036-3001			2816	

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/728,848

Applicant(s)

KIM ET AL.

Examiner

Terry L. Englund

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Dec 8, 2003.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-12 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

The drawings are objected to because Prior Art Fig. 1 shows blocks 1-3 without showing how they relate (e.g. are connected) to one another. Fig. 8. "40" should be --50--. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities: The relationships between the three blocks shown in Fig. 1 are not described in the figure's description. Page 4, line 9, "Fig. 1" should be --Fig. 2-- since the test mode blocks 100 and 200 are shown in that figure. It is believed "test voltage output unit 300" on line 5 of page 6 should be --data output circuit 300-- (e.g. see page 5, line 3). Page 7, line 5 "P1" should be --P2--. Appropriate corrections are required.

### ***Claim Objections***

Claims 1-4, 6, and 8-9 are objected to because of the following informalities: To improve word flow within claim 1, it is suggested a comma be added after "activated" on line 12, and after "inactivated" on line 14. For consistent labeling, "stored" on line 15 of claim 1 should be changed to --signal stored-- to correspond to "a signal stored" already recited on line 4 of the same claim. Claim 6, line 8 "a first" should be --the first-- since the control signal was previously recited on lines 4-5 of claim 5. For similar reasons, "a second" on line 8 of claim 8 should be --the second-- since the control signal was previously recited on line 8 of claim 5. Dependent claims carry over the objection(s) from any claim(s) upon which they depend. Appropriate corrections are required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants

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regard as the invention. It is not understood in each of independent claims 1 and 5 how an “internal voltage generator” (line 1) can apparently comprise itself (e.g. see line 8 of claim 1, and line 9 of claim 5). If they refer to different internal voltage generators, it is suggested their labels be changed to clearly distinguish them from one another. Related to this, it is not clear which of these two “internal voltage generator” phrases within claim 1 is being referred to by “the internal voltage generator” recited within line 2 of each of claims 3 and 4. For example, if it refers to the “internal voltage generator” recited on line 8 of claim 1, how can the generator “further” comprise a (de)multiplexer when it hasn’t been described as comprising anything else yet? The “second tuning unit”, “second setup device”, and “second characteristic controller” within claim 8 implies a first of each that has not been identified within the claim’s chain of dependency. Was claim 8 meant to depend on claim 6 that recites the first unit, first device, and first controller? Which “internal voltage generator” of claim 5 (e.g. see lines 1 and 9) does “the internal voltage generator” on each of lines 2, 12, and 15 of claim 10 refer to?

Claim 7 recites the limitation "the first setup device" in line 2. There is insufficient antecedent basis for this limitation in the claim. Was this claim meant to depend on claim 7? For example, claim 9 cites similar limitations, wherein it depends on claim 8 which provides the proper antecedent basis.

Dependent claims carry over any rejection(s) from any claim(s) upon which they depend.

No claim is allowable as presently written.

***Allowable Subject Matter***

However, claims 1 and 5 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action. There is presently

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no strong motivation to modify or combine any prior art reference(s) to ensure the preamble's internal voltage generator comprises: 1) a tuning unit, characteristic controller, and a (different) internal voltage generator as recited within claim 1, wherein the control signal of the tuning unit is determined in accordance with the test mode signal; and 2) a data output unit receives the test mode signal, that is also supplied to the first/second test mode blocks, and outputs the internal voltage of a (different) internal voltage generator as recited within claim 5. [Note: It is believed the "internal voltage generator" recited within the body of the independent claims was meant to be different from the "internal voltage generator" recited within the preamble of those claims.]

Also, dependent claims 2-4 and 6-12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Some of these claims have their own respective 112 problems, and all of them carry over the rejections from their respective independent claim 1 or 5 previously described.

### ***Prior Art***

The prior art references on the accompanying PTO-892 are cited for interest and documentation purposes only. None of them clearly shows or discloses all of the limitations recited within either of the independent claims (e.g. see the above Allowable Subject Matter section). Fig. 3 of Cordoba et al. shows tuning unit 30 (for receiving test mode signal TEST, an external signal (e.g. CLK, EN, or RASB), and signal 54 stored in internal setup device 52) that outputs control signal 32; characteristic controller 5660,61 receives control signal 32 and outputs characteristic controlling signal VREFP; and internal voltage generator 38 receives reference input voltage VDIVIDE and characteristic controlling signal VREFP, and controls internal

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voltage VCCINT. However, the level of the control signal being determined by the external signal or the stored signal, depending on if the test mode signal is activated or inactivated, is not clearly shown or disclosed. Kim et al. shows an internal voltage generator with tuning unit 300; characteristic controller 400; and internal voltage generator 900. However, details of 300 (e.g. see Fig. 6), do not indicate tuning unit 300 receives a test mode signal, an external signal, and a stored signal as recited within claim 1. Nishimura et al.'s Fig. 1 shows tuning unit 11-12 (for receiving test mode signal TEST1, external signal a, and stored signal b from internal setup device 11) that outputs control signal SETTING SIGNALS; characteristic controller 13 receives the control signal, and outputs characteristic controlling signal  $V_{rf}$ ; and internal voltage generator 21 receives  $V_{rf}$  and controls internal voltage  $V_{ref1}$ . However, Fig. 5 (showing an example of 21), does not show the generator also receiving a reference input signal (different from internal voltage  $V_{pref1}$ ). Also, the reference does not clearly show or disclose the control signal being determined by the external signal or the stored signal with respect to the test mode signal. Fig. 2 of Kobayashi et al. shows tuning unit 101 (shown in detail in Fig. 3 receiving test mode signal TMODE, external signal, and a signal stored in internal setup device T101-T103, 12,15-16) outputting control signal MODEm1(/MODEm1); characteristic controller 100 receiving the control signal and outputting characteristic controlling signal  $V_{ref}$ ; and internal voltage generator 5 receiving reference input signal BIAS and controlling signal  $V_{ref}$ , for controlling a characteristic of internal voltage Int.Vcc. Although the output of NAND gate 11 of tuning unit 101 (e.g. see Fig. 3) will be determined by external signal TUNE when test mode signal is activated (i.e. at a logic high), because of the NOT-OR logic gate 14 (shown in Fig. 3), control signal MODEm1 (/MODEm1) is not clearly determined by the external signal TUNE/

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stored signal (from 16) when the test mode signal is activated/inactivated, respectively as recited within claim 1.

Also, it is noted that none of these four references show the first/second test mode blocks, and a data output unit, all receiving the test mode signal as recited within claim 5.

Any inquiry concerning this communication from the examiner should be directed to Terry L. Englund whose telephone number is (571) 272-1743. The examiner can normally be reached Monday-Friday from 7 AM to 3 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (571) 272-1740.

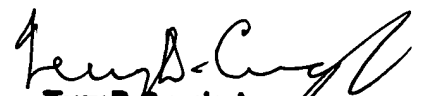
The new central official fax number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1562.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Terry L. Englund

20 March 2005

  
Terry D. Cunningham  
Primary Examiner